UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 December 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-66* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-66* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 1-66 are rejected under 35 U.S.C. 102(e) as being anticipated by Goldberg et

al(2004/0013112).

3.   As per claim 1, Goldberg et al. discloses a method for network protocol filtering of a

packet[0008], determining packet type(i.e. particular protocol) for the packet[0062]; obtaining

packet information for the packet[0009]; determining whether the packet information is in a

table; responsive to the packet information being in the table, obtaining an index from the table;

and storing the index in a data structure in association with the packet[0048, 0062-0063, 0066].

4.   As per claim 2, Goldberg et al. discloses determining whether the packet is for a new

connection and responsive to the packet not being for the new connection, the determining

whether the packet information is in the table[0009-0010, 0048].

5.   As per claim 3, Goldberg discloses wherein the packet type is a

Transmission Control Protocol type[0055].

6.   As per claim 4, Goldberg discloses wherein the packet type is a User

Datagram Protocol type[0055].

7.   As per claims 5, 36, Goldberg discloses wherein the packet information is a five-

tuple including source and destination addresses, source and destination ports,

and a packet type identifier [0055].

8.   As per claims 6, 37, Goldberg discloses wherein the packet type is a Generic

Routing Encapsulation type[0055, 0130].

9.   As per claims 7, 38, Goldberg discloses wherein the packet information is a five- tuple

including source and destination addresses, an apportioned Generic Routing Encapsulation

identifier, and a packet type identifier[0055, 0085].

10.   As per claims 8, 39, Goldberg discloses wherein the packet type is an Internet Protocol

Security type[0055-0056].

11.   As per claims 9, 40, Goldberg discloses wherein the packet information is a five- tuple

including source and destination addresses, an apportioned security parameter string; and a

packet type identifier[0009, 0055].

12.   As per claim 10, Goldberg discloses wherein the table is a connection table and the index

is to a network address translation table[0048, col. 3 table 3]

13.   As per claim 11, Goldberg discloses wherein the table is a network address translation

table and the index is to a connection table[0055, col. 3 table 3].

12.   As per claim 12, Goldberg discloses using the index to identify another index; and

storing the other index in another data structure in association with the packet[col. 7 and 8, tables

2-3].

13.   As per claim 13, Goldberg discloses wherein the other index is to an address resolution

table[col. 8 table 3].

14.   As per claim 14, Goldberg discloses a method for inbound network address translation

packet filtering[see col. 8 table 3], comprising: obtaining a packet; determining whether type of the packet is one of a Transmission Control Protocol[0009, 0062] , a User Datagram Protocol, a Generic Routing Encapsulation, an Internet Control Message Protocol type[0055]; if the type is the Transmission Control Protocol type, determining if the packet is an initial packet for a connection; if the type is the Transmission-Control Protocol type and the packet is for an existing connection, Obtaining packet information from the packet; determining whether the packet information is in a first table; responsive to the packet information being in the first table, obtaining a first index from the first table, the first index for a second table; storing the first index in a data structure associated with the packet; obtaining a second index from the second table responsive to the first index[0066, col. 7-8, table 2-3].

15.   As per claim 15, Goldberg discloses wherein the data structure is for a plurality of canonical frame headers[0061].

16.   As per claim 16, Goldberg discloses wherein the first table is a network address translation table[col. 8, table 3].

17.   As per claim 17, Goldberg discloses wherein the second table is a connection table[0048].

18.   As per claim 18, Goldberg discloses wherein the third table is an address resolution table[col. 7-8, table 2-3].

19.   As per claims 19, 41, Goldberg discloses checking validity of layers of the Packet; checking Internet Protocol options for the packet; and determining whether the packet is a fragment[0055-0056].

20.   As per claims 20, 42, Goldberg discloses determining whether

the network address translation, is supported by a network processing unit[0101, col. 8 table 3].

21.   As per claim 21, Goldberg discloses a method for inbound network address translation

packet filtering[0101 table 3], comprising: obtaining a packet;

determining whether type of the packet is one of a Transmission Control

Protocol[0009, 0062], if the type is the Transmission Control Protocol type, determining if the

packet is an initial packet for a connection[0066]; determining whether the packet information is

in a first table[0048]; responsive to the packet information being in the first table, obtaining

a first index from, the first table, the first index for a second table[0048, 0062-0063]; storing the

first index in a data structure associated with the packet; obtaining a second index from the

second table responsive to the first index; storing the second index in the data structure;

obtaining a third index from one of the first table and the second table, the third index to a third

table; and storing the third index in the data structure[col. 7-8, tables 2-3].

22.   As per claims 22, 27, 32, 44, 48, 52, wherein the data structure is for a plurality of

canonical frame headers[0061].

23.   As per claims 23, 28, 33, 45, 49, 53, Goldberg discloses wherein the first table is a

network address translation table[col. 8, table 3].

24.   As per claims 24, 29, 34, 50, Goldberg discloses wherein the second table is a

connection table[0048].

25.   As per claims 25, 30, 35, Goldberg discloses wherein the third table is an address

resolution table[col. 8, table 3].

26.   As per claim 26, limitations have already been addressed see claim 1.

27.   As per claims 31, 43, 47, 51, Goldberg discloses a method for outbound packet

filtering[0045, 0054], comprising obtaining a packet[0009]; determining whether an incoming

interface for the packet is running network address translation; if the incoming interface is

running the network address translation[0055], obtaining a first index from a data structure

associated with the packet; and obtaining packet information in a first table using the first index;

determining whether type of the packet is one of a Transmission Control Protocol[0066], if the

type is the Transmission Control Protocol type, determining if the packet is an initial packet for a

connection; if the type is the Transmission Control Protocol type and the packet is for an existing

connection obtaining the packet information from the packet[0062-0063, 0066]; determining

whether the packet information is in a second table; responsive to the packet information being

in the second table, obtaining a second index from the second table; storing the second index in

the data structure[col. 7-8, tables 2-3]; checking whether the packet is the Transmission Control

Protocol type; and responsive to the packet being the Transmission Control Protocol type,

checking for a Transmission Control Protocol state error of the packet if the Internet Protocol

Security type[0066, 0071], obtaining packet information from the packet; determining whether

the packet information is in the second table; responsive to the packet information being in the

second table, obtaining the Second index from the second table; and storing the second index in

the data structure[0055-0056]; if the type is the Internet Control Message Protocol type,

determining, whether the Internet Control Message-Protocol type is on a list of Internet Control

Message Protocol types[0067]; if the type is not the Internet Control Message Protocol type,

determining if the outgoing interface is running the network address translation; responsive to

the outgoing interface running the network address translation, obtaining the second index from the data structure; and obtaining the packet information from the first table using the second index[0067-0069].

28.   As per claim 54, Goldberg discloses wherein the first index is to a connection table[0048], and wherein the second index is to the network address translation table[col. 8, table 3].

29.   As per claims 55-56, Goldberg discloses an apparatus for network protocol filtering of a packet[0008], comprising: means for determining packet type for the packet[0062]; means for obtaining packet information for the packet[0009]; means for determining whether the packet information is in a table[0048, 0062-0063, 0066]; means for obtaining an index from the, table responsive to the packet information being in the table[0048, 0062-0063, 0066]; and means for storing the index in a header of the packet[0055, col. 7-8 tables 2-3].

30.   As per claim 57, method-for network address translating, comprising: obtaining a packet for network address translation, the packet having a media access control header[0055-0056, col. 7-8 tables 2-3]; determining if a network processing unit is in a pass-through mode responsive for the packet; and responsive to the network processing unit not being in the pass-through mode, obtaining a media access control source address from the media access control header is stored in an address resolution table[0056, tables 2-3]; determining whether an incoming *interface* is running network address translation; and network address translation filtering the packet responsive to the incoming interface running the network address *translation,* the network address translation filtering including, obtaining an address resolution table index from the packet[0009, 0062, col. 7-8 tables 2-3].

31.   As per claim 58, Goldberg discloses wherein the pass-through mode is a firewall only mode[0052].

32.   As per claim 59, Goldberg discloses further comprising: determining whether the packet is for a multicast or broadcast frame; determining whether the incoming interface equals an outgoing interface; and reading control bits for the packet responsive to the media access control source address obtained[0061-0062, 0065-0066].

33.   As per claim 60, Goldberg discloses determining protocol type of the packet; and determining whether the protocol type is supported on the outgoing interface[0009, 0055].

34.   As per claim 61, Goldberg discloses further comprising determining whether broadcasting or multicasting is invoked for the outgoing interface[0061-0062, 0065-0066].

35.   As per claims 62-63, Goldberg discloses an apparatus for network address translating, comprising: means for obtaining a packet for network address translation, the packet having a media access control header; means for determining if a network processing unit is not in a pass-through mode responsive for the Packet[0055-0056, col. 7-8 tables 2-3]; means for obtaining a media access control source address from the media access control header is stored in an address resolution table; means for reading control bits for the packet responsive to the media access control source address obtained; means for determining whether an incoming interface is running network address translation; and means for network address translation filtering the packet responsive to the incoming interface running the address translation, the means for network address translation filtering including means for obtaining an address resolution table index from the packet[0009, 0056, 0062].

36.   As per claim 64, Goldberg discloses determining if network address translation is running

on an inbound interface responsive to network address translation running on the inbound

interface, obtaining a connection table index[0048] and a network address table index[col. 7-8

tables 2-3]; and translating local address packet information to public address packet information

for a packet[0054-0055, 0066].

37.   As per claim 65, Goldberg discloses wherein the translating comprises obtaining the local

address packet information and the public address packet information from a connection table

and a network address translation table, respectively, respectively responsive to the connection

table index and the network address table index[0048, 0054-0055, 0066].

38.   As per claim 66, Goldberg discloses determining if the packet is a Transmission Control

Protocol ("TCP") packet; responsive to the packet being a TCP packet, checking validity of

Internet Protocol options; and checking TCP state for an error[0062, 0066].

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to JENISE E. JACKSON whose telephone number is (571)272-

3791. The examiner can normally be reached on Increased Flex time, but generally in the office

M-Fri(8-4:30)..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kristine Kincaid can be reached on (571) 272-4063. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

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like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

August 17, 2008
/J. E. J./
Examiner, Art Unit 2139

/Kristine Kincaid/
Supervisory Patent Examiner, Art Unit 2139